MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2022/2023 (TERM ID 2220)

BBF2154 – INVESTMENT

(All sections / Groups)

7 JULY 2023
9:00 a.m – 11:00 a.m
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This Question paper consists of 4 pages with 4 Questions.
2. Attempt **ALL** questions. The distribution of the marks for each question is given.
3. Students are allowed to use non-programmable scientific and financial calculators.
4. Please write all your answers in the Answer Booklet provided.

QUESTION 1

a) Each investor has a unique investment objective when investing funds. Discuss **TWO (2)** primary components utilised to calculate the rate of return earned from an investment.

(10 marks)

b) The industry life cycle refers to the distinct phases that an industry progresses through, commencing with the launch of the initial product and culminating in its ultimate demise. Discuss **FIVE (5)** stages of the industry life cycle and the dividend payment pattern over the cycle.

(10 marks)

c) A market refers to a venue where individuals interested in buying or selling assets can engage in transactions to transfer ownership. Compare and contrast the primary market with the secondary market.

(5 marks)

(Total: 25 marks)

QUESTION 2

(a) Angelica holds a portfolio containing two stocks, specifically Stock A and Stock B, which have equal weightage. The standard deviation of Stock A is 3.9, while Stock B has a standard deviation of 5.1. The correlation between these two stocks is -0.70.

(i) Calculate the portfolio standard deviation.

(4 marks)

(ii) Define standard deviation.

(3 marks)

(iii) Compare and describe the portfolio standard deviation with standard deviation for both Stock A and Stock B.

(3 marks)

(iv) What is the standard deviation of treasury bill?

(3 marks)

Continued .....

(b) Abundance has made an investment in a bond with the following particulars:
- The bond has coupon interest rate of 18%
- Its par value is RM1000
- The bond's current market price is RM1800, and it will reach maturity in 18 years.

(i) Calculate the yield to maturity (YTM) of this bond, using semi-annual compounding.

(4 marks)

(ii) Calculate the yield to call (YTC) of this bond, using semi-annual compounding, if the call of the bond can be made in 8 years at a price of RM1280.

(4 marks)

(iii) Explain the difference between yield to maturity (YTM) and yield to call (YTC).

(4 marks)

(Total: 25 marks)

QUESTION 3

(a) The selling price for stock Geneyus is RM58.50 with options available at 50, 60, and 70 exercise prices. The 60 call option price is RM3.75.

(i) Calculate the intrinsic value of the 60 call.

(2 marks)

(ii) Is the 60 call in the money? Explain.

(2 marks)

(iii) Calculate the speculative premium on the 60 call option.

(3 marks)

(iv) Calculate the percentage of speculative premium over the stock price.

(2 marks)

(v) Are the 50 and 70 call options in the money? Explain.

(4 marks)

Continued .....

(b) The capital asset pricing model employs the capital market line (CML) to represent the expected returns of efficient portfolios based on the level of risk associated with a market portfolio. The following are figures that Kaelee has collected relating to CML:

- risk-free rate (R_F) = 10%,
- market rate of return (K_M) = 14%,
- market standard deviation (σ_M) = 12%
- standard deviation of the portfolio (σ_P) = 13%.

(i) Using the formula for the capital market line, calculate the expected value of portfolio (K_P).

(5 marks)

(ii) Assume the portfolio standard deviation (σ_P) has increased to 18%. Using the formula for the capital market line, calculate the expected value of portfolio (K_P).

(5 marks)

(iii) Compare the answer in part (i) and part (ii). In terms of capital market theory, explain whether the expected value of portfolio (K_P) is increased.

(2 marks)

(Total: 25 marks)

QUESTION 4

(a) Lifewave Corporation anticipates a non-constant growth pattern for dividends. Dividends at the end of year 1 are RM10.00 per share and are expected to grow by 16% per year until the end of year 5. After year 5, dividends are expected to grow at 6% as far as the company can see into the future. All dividends are to be discounted back to present at a discount rate of 10%.

(i) Compute the dividend for year 2 until year 5.

(4 marks)

(ii) Solve the NPV for all dividends from year 1 until year 5.

(3 marks)

(iii) Calculate the dividend in year 6.

(2 marks)

(iv) Calculate the present value of year 5 stock price.

(2 marks)

(v) Compute the total present value of stock.

(2 marks)

Continued .....

(b) A futures contract is a legally binding agreement that entails buying or selling a particular commodity or asset at a pre-determined price on a specified future date. Assume that Raena purchase futures contract for oat for RM8.20/bushel. The oat price increases to RM8.60/bushel. Assumed oat trade in 5000-bushel/contract and the margin requirement is 8%.

(i) Calculate the value of oat futures contract.

(3 marks)

(ii) Calculate the margin requirement for the oat futures contract.

(3 marks)

(iii) Calculate the total gain on oat futures contract.

(3 marks)

(iv) Calculate the percentage profit for oat futures contract.

(3 marks)

(Total: 25 marks)

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